

In the Specification:

Please amend paragraph [0037], beginning at p. 12, line 25 of the specification, as follows:

[0037] FIG. 2 illustrates the phenomenon of imaging in one embodiment of receiver system 15. Specifically, FIG. 2 illustrates the spectral distribution of an exemplary combination of signals at the input to and output of IQ mixer 25. At the input to IQ mixer 25, a ~~complex signal of interest S~~ the signal of interest, whose complex baseband representation is S(t), may be present at a frequency $f_{LO} + f_{IF}$ while ~~an unrelated complex signal A~~ an unrelated signal, whose complex baseband representation is A(t), may be present at the image frequency of S, $f_{LO} - f_{IF}$. In one embodiment, f_{IF} may be chosen to be the same frequency as the channel spacing frequency for a particular RF communication standard, such as 200 kHz. In such an embodiment, signal A may represent a signal in a different channel than signal S and may have a larger magnitude than signal S. In the illustrated example, signal A is two channels removed from signal S and may be referred to as an alternate channel signal relative to signal S. As signals S and A are complex, conjugate signal versions S^* and A^* exist in the negative frequency plane at frequencies $-(f_{LO} + f_{IF})$ and $-(f_{LO} - f_{IF})$, respectively.

Please amend paragraph [0042], beginning at p. 15, line 7 of the specification, as follows:

[0042] Mathematically, the operations illustrated in FIG. 3A may be represented as:

$$z(t) = y(t) - \alpha y^*(t)$$

where $y(t)$ is as given above. Substituting terms of $y(t)$ and expanding gives:

$$\begin{aligned} z(t) &= S(t)e^{j2\pi f_{IF}t} + IA^*(t)e^{j2\pi f_{IF}t} + A(t)e^{-j2\pi f_{IF}t} + IS^*(t)e^{-j2\pi f_{IF}t} \\ &\quad - \alpha S^*(t)e^{-j2\pi f_{IF}t} - \alpha I^* A(t)e^{-j2\pi f_{IF}t} - \alpha A^*(t)e^{j2\pi f_{IF}t} - \alpha IS(t)e^{j2\pi f_{IF}t}. \end{aligned}$$

Collecting terms and disregarding the negative frequency terms gives approximately

$$[[z(t) \approx S(t)e^{j2\pi f_{IF}t} + (I - \alpha)A(t)e^{j2\pi f_{IF}t}]]$$

$$\underline{z(t) \approx S(t)e^{j2\pi f_{IF}t} + (I - \alpha)A*(t)e^{j2\pi f_{IF}t}}$$

from which can be seen that if complex correction factor α can be chosen to be a value close to native image rejection factor I, performing the operations shown in FIG. 3A may result in reduction or elimination of the unwanted image signal component interfering with the signal of interest during conversion of the received RF signal to the IF.

Please amend paragraph [0055], beginning at p. 20, line 26 of the specification, as follows:

[0055] FIG. 5 is a block diagram illustrating one embodiment of a digital receiver system. In the illustrated embodiment, digital receiver system 500 is coupled to receive I and Q components of a digital signal from ADC 40 of receiver 15. Digital receiver system 500 includes an image rejection correction filter 510 coupled to receive I and Q components of a digital signal as well as real and imaginary components α_r and α_i of a complex image correction factor. A direct digital frequency synthesizer (DDFS)/mixer 520 is coupled to receive the output of image rejection correction filter 510 and an IF frequency signal f_{IF} . The I component output of DDFS/mixer 520 is coupled to a decimation filter 530a, which is coupled in turn to a finite impulse response low pass filter (FIR LPF) 540a and a programmable gain amplifier (PGA) 550a. The Q component output of DDFS/mixer 520 is coupled to a decimation filter 530b, which is coupled in turn to an FIR LPF 540b and a PGA 550b. The I and Q outputs of PGAs 550a and 550b, respectively, are coupled to additional circuitry (not shown) configured to perform processing of the information content of the baseband signal.